Draft
Environmental Assessment

for

South Fork of Coal Creek Habitat Enhancement Project

June 2013

Montana Fish, Wildlife & Parks

Draft Environmental Assessment
MEPA CHECKLIST

PART I. PROPOSED ACTION DESCRIPTION

1. Type of proposed state action: Montana Fish, Wildlife & Parks (FWP) proposes to implement a project to increase available spawning and rearing habitat for westslope cutthroat trout and bull trout by adding large, woody debris into an impaired section of the South Fork of Coal Creek, a tributary to the North Fork of the Flathead River. This portion of the drainage has been historically degraded by human activities that have limited recruitment of habitat structures and features beneficial to fish in all life stages. Large wood structures are important components of fish habitat, providing cover and flow refuge for young fish, while creating pools and recruiting spawning gravel for adults. Large wood aggregates would be constructed with locally imported, whole trees passively anchored to emulate natural habitat arrays found in other sections of Coal Creek.

A fish and habitat assessment has been performed in the proposed enhancement reach for comparison to posttreatment conditions. A reference reach (located in similar, local stream that is not impaired) has been selected for additional pre- and posttreatment comparisons, and monitoring would continue to evaluate short- and long-term impacts of enhancement (one, three, and five years posttreatment, minimum). Monitoring would consist of quantifying project objectives, including pool frequency and diversity; substrate characteristics; channel roughness; large, woody debris retention; and estimates of fish abundance and age classes.

2. Agency authority for the proposed action: Montana Fish, Wildlife & Parks (Montana Code Ann. 87-1-201(1)). The proposed project is consistent with the Fish Habitat Goals outlined in the Statewide Fisheries Management Plan, 2013-2018.

Fish Habitat Goals:
1. Preserve and protect aquatic habitats.
2. Restore and enhance degraded aquatic habitats.
3. Restore and maintain adequate water flow in streams and satisfactory water levels in lakes and reservoirs.

3. Name of project: South Fork of Coal Creek Habitat Enhancement Project

4. Name, address, and phone number of project sponsor (if other than the agency): N/A

5. Anticipated schedule:
Estimated construction commencement date: July 8, 2013
Estimated construction completion date: September 1, 2013
Current status of project design (% complete): 100%

6. Location affected by proposed action:
Flathead County, Sections 25 and 26, T32N, R22W

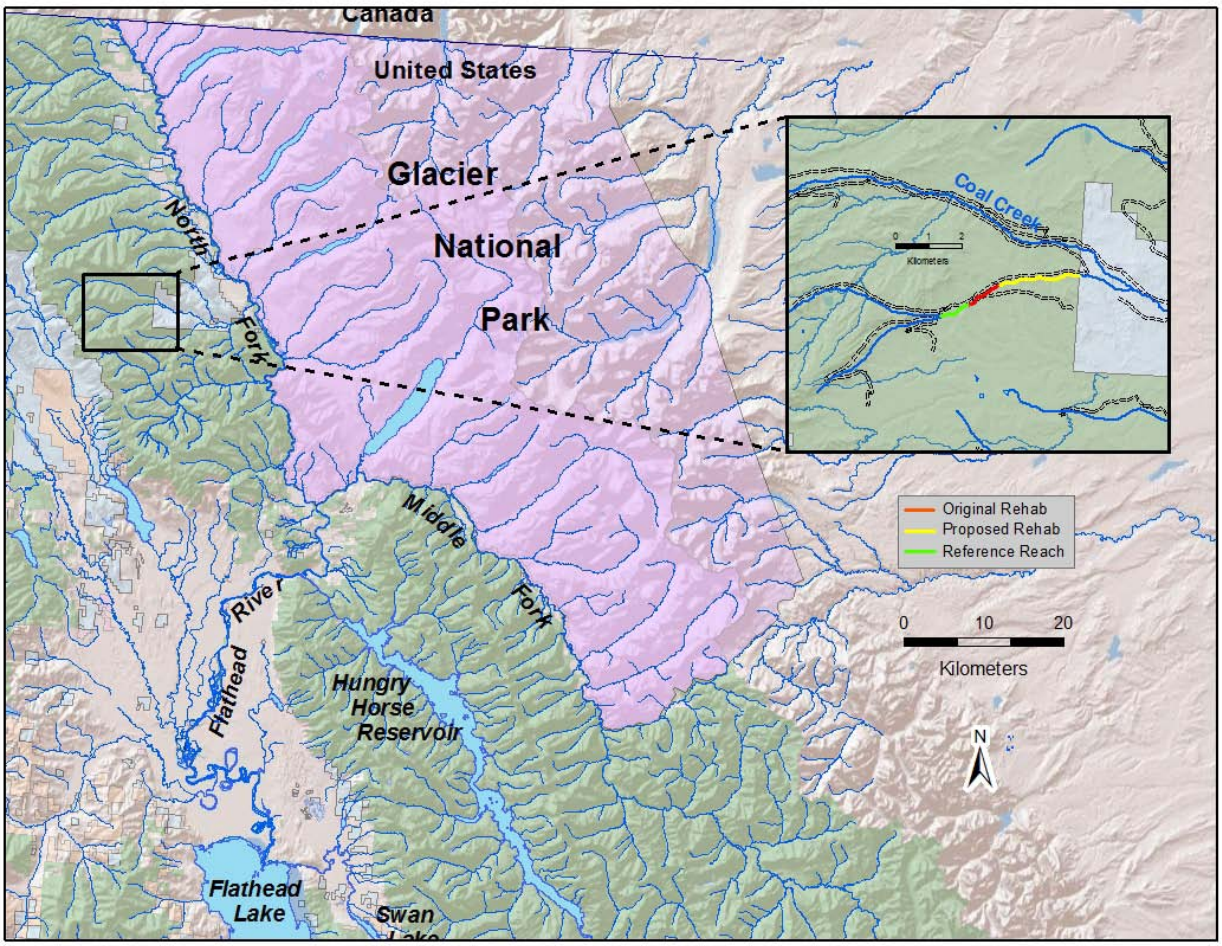

Figure 1. Location of proposed fish habitat enhancement in the South Fork of Coal Creek, a tributary to the North Fork Flathead River.

7. Project size:

	Acres		Acres
(a) Developed:		(d) Floodplain	**
Residential	0		
Industrial	0	(e) Productive:	
		Irrigated cropland	0
(b) Open Space/	*	Dry cropland	0
Woodlands/Recreation		Forestry	0
(c) Wetlands/Riparian	**	Rangeland	0
Areas		Other	0

*Previously burned forest will be used to collect 132-200 trees of various diameters and lengths.
**Approximately 9,800 linear feet of creek would be affected during in-stream work. Large wood aggregates would extend into the active channel 6-8 feet and no further than 50 feet into the floodplain.

8. Listing of any other local, state, or federal agency that has overlapping or additional jurisdiction:

a) Permits: Permits will be filed at least 2 weeks prior to project start.

Agency Name	Permits
U. S. Army Corps of Engineers	Section 404
Department of Environmental Quality	318 Authorization
Montana Fish, Wildlife & Parks	124 Permit

b) Funding:

Agency Name	Funding Amount
Bonneville Power Administration	$172,725

c) Other overlapping or additional jurisdictional responsibilities:

Agency Name	Type of Responsibility
U.S. Forest Service - Flathead National Forest	Landowner

9. Narrative summary of the proposed action:

The Coal Creek watershed, a tributary to the North Fork Flathead River, provides critical habitat for native fishes. It is an important spawning and rearing tributary for Flathead Lake bull trout, a species listed as Threatened under the federal Endangered Species Act (USFWS 1998), and an important rearing area for both resident and migratory westslope cutthroat trout (Fraley and Shepard 1989; Deleray et al.1999). In an effort to quantify bull trout populations, annual index and occasional basin-wide redd counts (spawning surveys) have been conducted since 1980 (Deleray et al. 2006). These counts indicated a decline in bull trout spawning in Coal Creek (Deleray et al. 2006). Approximately 15% of all spawning that occurred in the Coal Creek drainage was in South Fork of Coal Creek (SFCC); however, since 1992 only 5% of all bull trout spawning in the Coal Creek drainage has taken place in the SFCC (Weaver et al. 2006).

With increasing concern for bull trout and westslope cutthroat trout persistence, Montana Fish, Wildlife & Parks (FWP), in cooperation with the Flathead National Forest, conducted a suite of surveys to identify sediment sources, bank instability, and potential restoration actions in the Coal Creek watershed in 1988 and 2003 (Weaver et al. 2004). The final report concluded that the riparian zone throughout the Coal Creek drainage had been compromised. Land management activities along the stream channel in the 1950s and 1960s had created areas of instability throughout the three forks of the Coal Creek drainage (Weaver et al. 2004). For example, large wood was removed along the banks of SFCC with inadequate Streamside Management Zones (SMZs). Fewer pools and courser substrate were documented, resulting in a more simplified channel with reduced spawning and rearing habitat for fish. When the riparian zone is compromised, large wood recruitment, temperature cycles, and cover are altered, impacting juvenile fish rearing, overwintering, and adult spawning habitat availability (Furniss et al. 1991). Recruitment of large wood into a channel can be expected to remain low for 50 to 100 years through a riparian corridor that has been harvested (Murphy and Koski 1989; McHenry et al. 1998). For more details on channel surveys see Weaver (1989) and Weaver et al. (2004).

In response to documented habitat impairment in the Coal Creek watershed, FWP initiated enhancement work on approximately 2,100 ft of stream in the upper reaches of SFCC during the summer of 2008. The primary goal was similar to that of the currently proposed project, namely to improve habitat for adult and juvenile bull trout and westslope cutthroat trout by adding large, woody debris (LWD) to a section of the creek impaired by riparian timber harvest and stream channelization. Large wood structures are important components of fish habitat, providing cover and flow refuge for young fish while creating pools and recruiting spawning gravel for adults. Pre- and post-enhancement monitoring has included quantifying pool frequency and diversity, substrate characteristics, LWD retention, and fish abundance and age classes throughout the enhanced area. Monitoring of physical and biological responses at one, three, and five years post-enhancement has shown positive results. Pool frequencies, scour, and deposition related to the LWD structures have increased. Instream wood volume has increased on average more than 1,500%, and natural recruitment of small wood to the installed structures has remained within the channel, creating diverse habitat and cover for native fishes. Estimated abundances and densities of bull trout in and near the enhancement area have increased since 2008.

The proposed project would expand immediately downstream of the enhancement completed in 2008 (Figures 1 and 2). This project would be about 9,800 ft in length and would remediate remaining portions of SFCC directly affected by riparian logging. The goal of the proposed work is to increase suitable spawning and rearing habitat for native fishes within the drainage by reestablishing large, woody debris aggregates, channel-spanning logs, and single log veins. The proposed project may also add structure to existing pools to encourage further pool development at each site. The objectives of this habitat enhancement project include: 1) increase pool habitat frequency and complexity for resting and rearing juvenile and adult fishes, 2) increase the distribution of spawning substrate for adult bull trout, 3) increase pool habitat diversity, 4) increase channel roughness, and 5) increase LWD retention.

An adjacent area of Flathead National Forest that burned during 2006 (the Sun Dog Fire) was used as a wood source for an enhancement project completed in 2008 and may serve a similar role in the proposed project. Large wood aggregates would be primarily constructed because they have been found to create and maintain pools more effectively than single pieces of wood. About 132-196 whole trees would be needed to create the proposed 33 - 49 LWD structures. Selected LWD would have a wood diameter ranging from 18 inches to 24 inches measured at breast height, a minimum stem length of 30 feet, and would include root fans when possible. Wood would be removed by helicopter and transported to designated sites along the stream channel. A spyder (a small, reduced-footprint backhoe) would be used to rearrange wood pieces in the stream channel. Monitoring would consist of quantifying project objectives, including pool frequency and diversity, substrate characteristics, channel roughness, LWD retention, and estimates of fish abundance and age classes.

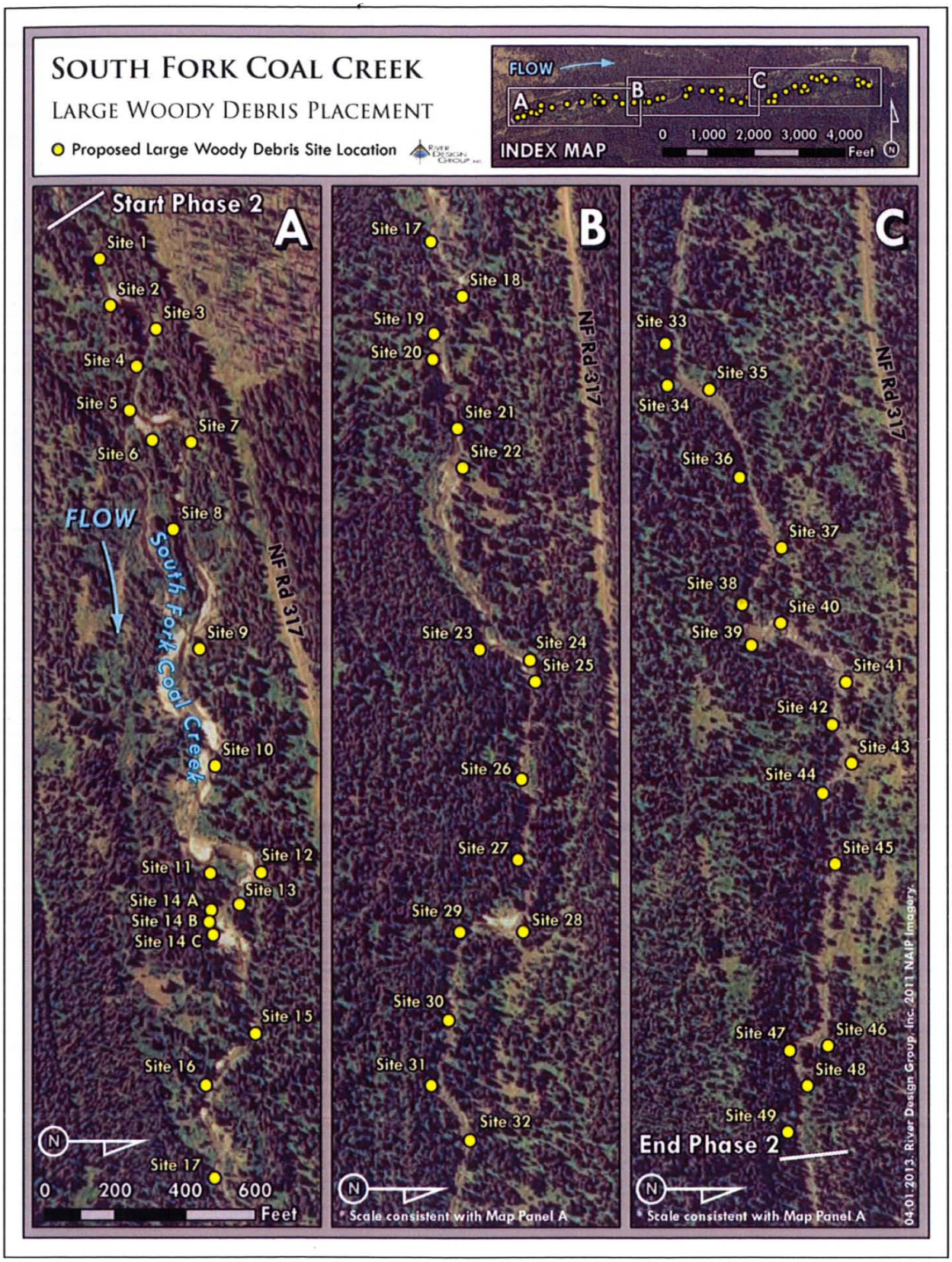

Figure 2. Proposed locations of large wood aggregates in the South Fork of Coal Creek.

Figure 3. Examples of large, woody debris structures proposed for installment in the South Fork of Coal Creek, including a constructed aggregate (left) and a whole tree with root fan (right).

10. Description of Alternatives:

Alternative A: No Action

If no actions were taken, direct impacts would include no improvement of currently diminished channel complexity, spawning gravel, rearing, and overwintering fish habitat in SFCC. Secondary impacts of degraded habitat conditions would likely include a continuation of limited production and survival of native fishes including bull trout and westslope cutthroat trout. Very little wood will be naturally recruited into this stretch of the channel in the next 50 years, making fish habitat improvement unlikely for at least that time span.

Alternative B: Proposed Action

Montana Fish, Wildlife & Parks proposes to enhance natural recruitment of fish spawning and rearing habitat in SFCC in response to impairments caused by human activities. The objectives of this habitat enhancement project include: 1) increase pool habitat frequency and complexity for resting and rearing juvenile and adult fishes, 2) increase the distribution of spawning substrate for adult bull trout, 3) increase pool habitat diversity, 4) increase channel roughness, and 5) increase LWD retention. Large wood structures are important components of fish habitat, providing cover and flow refuge for young fish, while creating pools and recruiting spawning gravel for adults. Enhancement actions will include incorporating 33 - 49 LWD aggregates or single logs to the stream channel. An adjacent burn area used as a wood source for the upstream, completed project may provide a local LWD source for the proposed project. Wood will be selected from the donor site and transported by helicopter to designated sites along the stream channel. A spyder (a small, reduced-footprint backhoe) will be used to rearrange wood pieces in the stream channel. This alternative would use low impact equipment to minimize disturbances to the riparian area. Fish and habitat monitoring has been performed in the proposed enhancement reach for comparison to post-treatment conditions. A reference reach has been selected for additional pre and posttreatment comparisons, and monitoring would continue to evaluate short- and long-term impacts of enhancement (1, 3, and 5 years posttreatment, minimum). Monitoring would consist of quantifying project objectives, including pool frequency and diversity, substrate characteristics, channel roughness, LWD retention, and estimates of fish abundance and age classes.

PART II. ENVIRONMENTAL REVIEW CHECKLIST

Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment.

A. PHYSICAL ENVIRONMENT

1. LAND RESOURCES Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Soil instability or changes in geologic substructure?		X				
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil, which would reduce productivity or fertility?			X		yes	1b.
c. Destruction, covering or modification of any unique geologic or physical features?		X				
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?			X		yes	1d.
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?		X				
f. Other:						

1b. A spyder backhoe would be used to place large trees throughout the proposed project area. Downed trees with and without attached root wads would likely be selected from the nearby Sun Dog Fire (2006) area and flown by helicopter to the stream bank. No trees will be removed from the project site's riparian area. Minor and temporary disturbance to riparian soil may occur during the placement of large wood; however, FWP anticipates any short-term impacts will not produce detrimental or lasting effects on stream or riparian productivity. The use of a helicopter to move wood from nearby timber stands to the stream channel will further minimize erosion and compaction of soil.

1d. The action of importing trees into the riparian area and stream channel would likely change deposition and erosion dynamics within the stream, influencing pool development and long-term maintenance as well as gravel distribution. These impacts would be consistent with the goal and objectives of the proposed action, creating complex aquatic habitat benefiting fish at multiple life stages. Structures would be designed to promote channel scour, gravel deposition, and retention of LWD. Changes in siltation will only be visible while construction is taking place and will be minimized by the type of equipment used (i.e., spyder backhoe and helicopter) and time of year (i.e., base flows).

2. AIR **Will the proposed action result in:**	**IMPACT**					
	Unknown	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Emission of air pollutants or deterioration of ambient air quality? (Also see 13c.)			X		yes	2a.
b. Creation of objectionable odors?			X		yes	2b.
c. Alteration of air movement, moisture, or temperature patterns, or any change in climate, either locally or regionally?		X				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				
e. For P-R/D-J projects, will the project result in any discharge, which will conflict with federal or state air quality regs? (Also see 2a.)		N/A				
f. Other:		X				

2a. Air quality should not be adversely affected beyond minor exhaust emissions and dust associated with small scale construction activities.

2b. Exhaust emissions and the creation of objectionable odors would be limited to the short period of actual construction and would be substantially mitigated by the use of properly maintained equipment.

3. WATER Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Discharge into surface water or any alteration of surface water quality, including but not limited to temperature, dissolved oxygen, or turbidity?			X		yes	3a.
b. Changes in drainage patterns or the rate and amount of surface runoff?		X				
c. Alteration of the course or magnitude of floodwater or other flows?			X		yes	3c.
d. Changes in the amount of surface water in any water body or creation of a new water body?		X				
e. Exposure of people or property to water-related hazards such as flooding?		X				
f. Changes in the quality of groundwater?		X				
g. Changes in the quantity of groundwater?		X				
h. Increase in risk of contamination of surface or groundwater?		X				
i. Effects on any existing water right or reservation?		X				
j. Effects on other water users as a result of any alteration in surface or groundwater quality?		X				
k. Effects on other users as a result of any alteration in surface or groundwater quantity?		X				
l. For P-R/D-J, will the project affect a designated floodplain? (Also see 3c.)		N/A				3l.
m. For P-R/D-J, will the project result in any discharge that will affect federal or state water quality regulations? (Also see 3a.)		N/A				
n. Other:		X				

3a. Several measures will be implemented to reduce construction-related turbidity. Construction will take place during low flows, and minimal excavation to the stream banks and streambed are proposed. Structures will be mainly anchored by wedging LWD pieces between stable points on the bank (e.g., mature trees, rock outcrops, existing wood), producing minimal channel or stream bank disturbance. The project will be monitored for impacts during and after construction.

3c. The proposed project is on undeveloped U.S. Forest Service land, so threats to people or property related to water hazards are not applicable.

3l. FWP does not anticipate that the proposed project will affect a designated floodplain. Large wood structures would extend no more than 50 feet into the floodplain, which has been measured at 65 feet.

4. VEGETATION Will the proposed action result in?	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Changes in the diversity, productivity, or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?			X		yes	4a.
b. Alteration of a plant community?		X				
c. Adverse effects on any unique, rare, threatened, or endangered species?						
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?			X		yes	4e.
f. For P-R/D-J, will the project affect wetlands, or prime and unique farmland?		N/A				
g. Other:		X				

4a. Trees will be removed from surrounding forests to be used for LWD arrays. No trees will be taken from SFCC's riparian corridor; however, some trees within the riparian area will be rearranged to increase contact with the river channel. Downed trees with root wads located outside of the stream channel will be preferentially used, followed by trees from the adjacent Sun Dog Fire. Disturbed riparian vegetation will be reused at specific LWD structure locations when ground disturbance is necessary. Any excavation affecting the riparian vegetation will be remediated and replanted after LWD arrays are built. A helicopter and spyder backhoe will be used to transport trees and further minimize the disturbance of vegetation.

4e. Noxious weeds are a common concern anytime soil is disturbed. The primary potential source of noxious weeds involving the proposed project would be from the spyder backhoe. To mitigate that potential, the spyder will be clean and free of weeds prior to site arrival. Any increase in the presence of noxious weeds at the project site will be addressed with appropriate remedial actions.

5. FISH/WILDLIFE **Will the proposed action result in:**	**IMPACT**					
	Unknown	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Deterioration of critical fish or wildlife habitat?		X				
b. Changes in the diversity or abundance of game animals or bird species?		X				
c. Changes in the diversity or abundance of nongame species?		X				
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?		X				
f. Adverse effects on any unique, rare, threatened, or endangered species?		X				
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest, or other human activity)?		X				
h. For P-R/D-J, will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f.)		N/A				
i. For P-R/D-J, will the project introduce or export any species not presently or historically occurring in the receiving location? (Also see 5d.)		N/A				
j. Other:		X				

The proposed project is intended to improve habitat for bull trout and other fish species in SFCC. In-stream work will be performed between July 15 and September 1 to protect bull trout eggs, fry, and spawning from the project activities. Turbidity effects are expected to be short term and will not create lasting impacts on aquatic habitat. Fish and wildlife biologists with the U.S. Forest Service will be evaluating the potential impacts the project would have on grizzly bears and other threatened or endangered species, cavity nesters, and old growth nesters; however, the agency determined that no negative impacts would result from the nearby enhancement completed in 2008 (Forest Service decision memo, June 18, 2007), and FWP anticipates the same determination for this project. However, the proposed project would not proceed without approval from U.S. Forest Service biologists.

B. HUMAN ENVIRONMENT

6. NOISE/ELECTRICAL EFFECTS Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Increases in existing noise levels?			X			6a.
b. Exposure of people to severe or nuisance noise levels?			X			6b.
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				
e. Other:		X				

6a. Nuisance noise levels should not exceed those expected from normal equipment uses during similar construction activities and will end when the project is complete.

6b. The proposed project is located in an undeveloped area behind a U.S. Forest Service gate; therefore, exposure of people to severe noise should be extremely minimal.

7. LAND USE Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				
b. Conflict with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				
d. Adverse effects on or relocation of residences?		X				
e. Other:		X				

FWP anticipates no conflicts with land use. The area is located behind a locked gate on U.S. Forest Service land.

8. RISK/HEALTH HAZARDS Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?			X		yes	8a.
b. Affect an existing emergency response or emergency evacuation plan, or create a need for a new plan?		X				
c. Creation of any human health hazard or potential hazard?		X				
d. For P-R/D-J, will any chemical toxicants be used? (Also see 8a.)		X				
e. Other:						

8a. All equipment would be well maintained and cleaned of hydraulic fluids and similar contaminants prior to use in construction. A petroleum spill kit would be available on-site to contain any spills, though unlikely to occur. No additional chemicals would be applied or used during implementation of this project. Construction activities would occur in remote locations. Risks to human health are primarily limited to potential physical injury to workers during construction. This potential is reduced by pretreatment safety and response instruction and training that each worker involved will be required to undergo. First aid kits will be readily accessible on-site, and a satellite phone will be available for emergency use.

9. COMMUNITY IMPACT Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?		X				
d. Changes in industrial or commercial activity?		X				
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		X				
f. Other:		X				

No community impacts are expected because the closest communities/towns are approximately 50 miles away. The few vehicles entering the area will not create traffic hazards and will be limited to the number of trips in and out of the locked gate.

10. PUBLIC SERVICES/TAXES/UTILITIES **Will the proposed action result in:**	**IMPACT**					
	Unknown	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify:		X				
b. Will the proposed action have an effect upon the local or state tax base and revenues?		X				
c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				
d. Will the proposed action result in increased use of any energy source?		X				
e. Define projected revenue sources		X				
f. Define projected maintenance costs.		X				
g. Other:		X				

The project will not affect public services, taxes, or utilities. Funding for this work is provided by BPA and administered through FWP.

No maintenance is expected to be necessary to the wood aggregates. FWP would be monitoring the proposed project, funded by BPA.

11. AESTHETICS/RECREATION Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?		X				
b. Alteration of the aesthetic character of a community or neighborhood?		X				
c. Alteration of the quality or quantity of recreational/tourism opportunities and settings? (Attach Tourism Report.)		X				
d. For P-R/D-J, will any designated or proposed wild or scenic rivers, trails, or wilderness areas be impacted? (Also see 11a, 11c.)		N/A				
e. Other:						

The project will be designated to restore LWD assemblages that emulate natural habitat arrays found upstream and in other North Fork Flathead River tributaries. No meaningful effect on local aesthetics or recreation is anticipated.

12. CULTURAL/HISTORICAL RESOURCES Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Destruction or alteration of any site, structure, or object of prehistoric, historic, or paleontological importance?		X				
b. Physical change that would affect unique cultural values?		X				
c. Effects on existing religious or sacred uses of a site or area?		X				
d. For P-R/D-J, will the project affect historic or cultural resources? Attach SHPO letter of clearance. (Also see 12.a.)		N/A				
e. Other:		X				

U.S. Forest Service archeologists have no records of human prehistoric evidence on the project site. In the event that archeological material is encountered during the implementation of this project, work will be halted until it can be inspected and assessed by an archeologist.

SIGNIFICANCE CRITERIA

13. SUMMARY EVALUATION OF SIGNIFICANCE Will the proposed action, considered as a whole:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources that create a significant effect when considered together or in total.)		X				
b. Involve potential risks or adverse effects, which are uncertain but extremely hazardous if they were to occur?		X				
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard, or formal plan?		X				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		X				
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		X				
f. For P-R/D-J, is the project expected to have organized opposition or generate substantial public controversy? (Also see 13e.)		X				
g. For P-R/D-J, list any federal or state permits required.						13g.

13g. Adverse effects from construction should be minor and easily mitigated when the work is completed. No substantial controversy concerning this project is anticipated. Required permits include: 124 Permit (FWP); Section 404 Permit (US Army Corps of Engineers); 318 Authorization (MT Department of Environmental Quality). Secondary impacts include increasing available spawning, rearing, and overwintering habitat for bull trout and westslope cutthroat trout, potentially increasing abundances and system carrying capacity for the species through time.

Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

The construction work would be completed during low flows and between July 15 and September 1 to avoid bull trout spawning and fry emergence. Equipment used would have minimal impacts on the stream channel, riparian habitat, and surrounding lands. A helicopter would be used to transport trees, while a spyder backhoe (a small, reduced-impact backhoe) would maneuver along the creek to position structures with minimal disturbance. Vehicle access behind the locked gate will be issued by the USFS, but will be limited to a specific number of trips per day.

PART III. NARRATIVE EVALUATION AND COMMENT

The goal of the proposed project is to increase available spawning and rearing habitat for westslope cutthroat trout and bull trout by adding large, woody debris into an impaired section of the South Fork of Coal Creek, a tributary to the North Fork of the Flathead River. This portion of the drainage has been historically degraded by human activities that have limited recruitment of habitat structures and features beneficial to fish in all life stages. Large wood structures are important components of fish habitat, providing cover and flow refuge for young fish, while creating pools and recruiting spawning gravel for adults. Large wood aggregates would be constructed with locally imported, whole trees passively anchored to emulate natural habitat arrays found in other sections of Coal Creek. Fish and habitat monitoring has been performed in the proposed enhancement reach for comparison to posttreatment conditions. A reference reach has been selected for additional pre- and posttreatment comparisons, and monitoring would continue to evaluate short- and long-term impacts of enhancement (1, 3, and 5 years posttreatment, minimum). Monitoring would consist of quantifying project objectives, including pool frequency and diversity, substrate characteristics, channel roughness, LWD retention, and estimates of fish abundance and age classes.

PART IV. PUBLIC PARTICIPATION

1. Public Involvement

The public will be notified in the following manners to comment on this current EA, the proposed action, and alternatives:

- Two public notices in each of these papers: Hungry Horse News and Daily Inter Lake
- One statewide press release
- Public notice on the Fish, Wildlife & Parks web page: *http://fwp.mt.gov*

Copies of this environmental assessment will be distributed to the neighboring landowners and interested parties to ensure their knowledge of the proposed project.

This level of public notice and participation is appropriate for a project of this scope, having limited impacts, many of which can be mitigated.

2. Duration of comment period

The public comment period will extend for 21 days; the EA will be open for public review for this duration because FWP anticipates little to no controversy based on the location and nature of proposed work and based on the response to previous habitat enhancement work in the same drainage. Written comments will be accepted until 5:00 p.m., June 28, 2013, and can be mailed to the address below:

PART V. EA PREPARATION

1. Based on the significance criteria evaluated in this EA, is an EIS required?
No, the current checklist addresses all concerns for this type of a project. Minimal impacts will occur only during construction and occur within a small section of South Fork Coal Creek located behind a locked gate. The proposed restoration will take place during a short period of time, approximately 15 to 20 days, and will be monitored in future years. This project should complete the restoration activities in this section of creek, which had been affected by land management activities.

2. Preparers:

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3. List of agencies consulted during preparation of the EA

Montana Fish, Wildlife & Parks
USDA Forest Service
U.S. Army Corps of Engineers
Montana State Historic Preservation Office (SHPO)